

CONIDIA DISPERSAL OF *BOTRYOSPHAERIA* SPP. IN VINEYARDS

Diseases caused by *Botryosphaeria* spp. lead to significant grapes losses. *Botryosphaeria* spp. are ascomycetes frequently isolated from stocks showing deterioration symptoms. Thus, we consider useful to identify the dissemination period in the vineyard. The objective of this study is to determine peak periods of conidia releases by *Botryosphaeria* in the grapevine. Spore dispersal of *Botryosphaeria* spp. from *Vitis vinifera* was studied in 2005 and 2006 in a French vineyard. The experimental plot was located in the Alsace vineyards in the east of France. The parcel was planted in 1987 with *Vitis vinifera* cv Gewurztraminer.

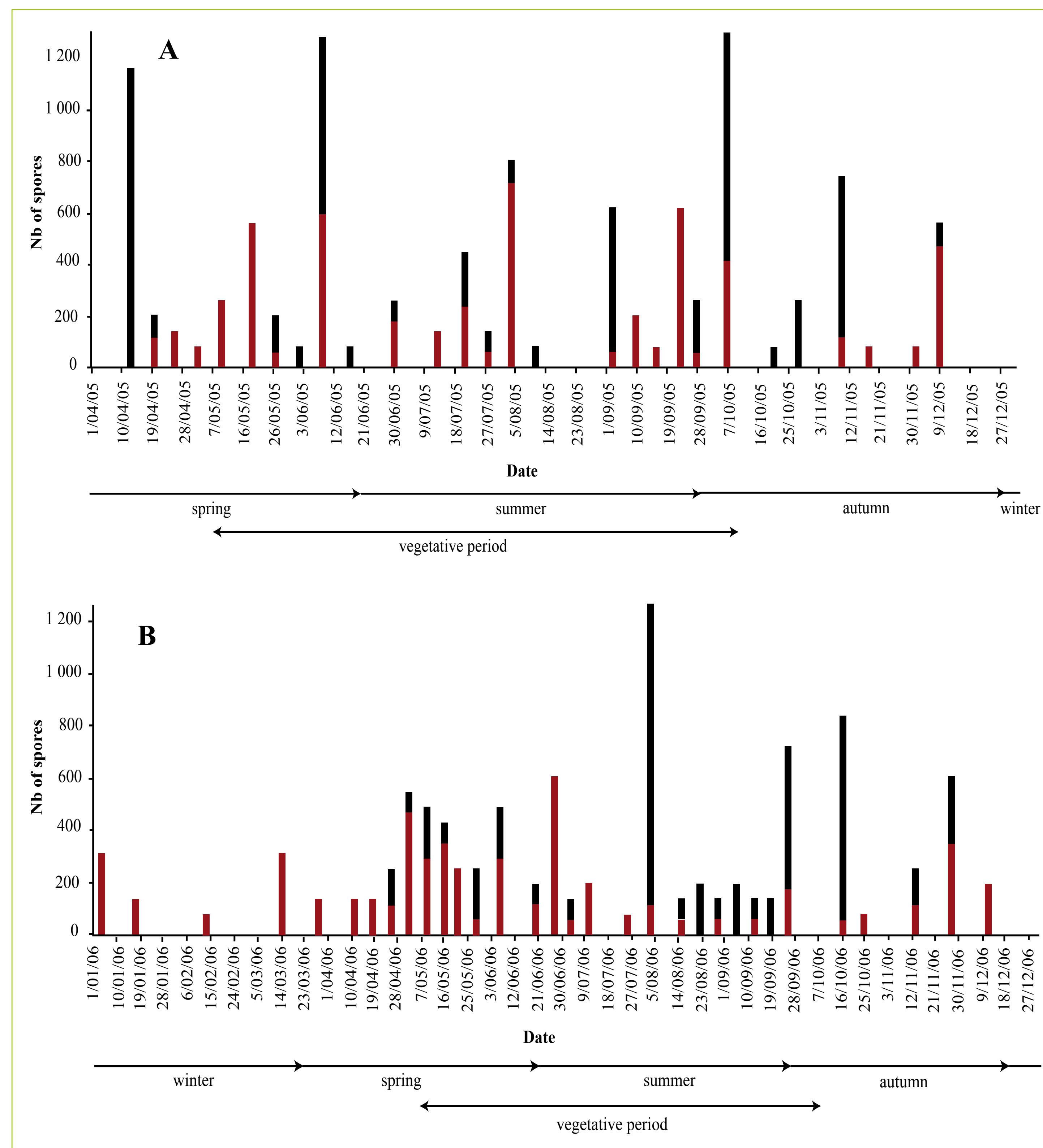
AIRBORNE DISPERSAL

Spores of *Botryosphaeria* were trapped from April 6th 2005 to December 31st 2006. 17 slides with petroleum jelly were placed in the vineyard. The slides were placed on 13 grapevine trunks carrying pycnidia of *Botryosphaeria* and having shown symptoms the previous years. Slides were placed on the top, on the middle or on the basis of the trunk. (Photos).

Examples of slide positions on the vine trunk



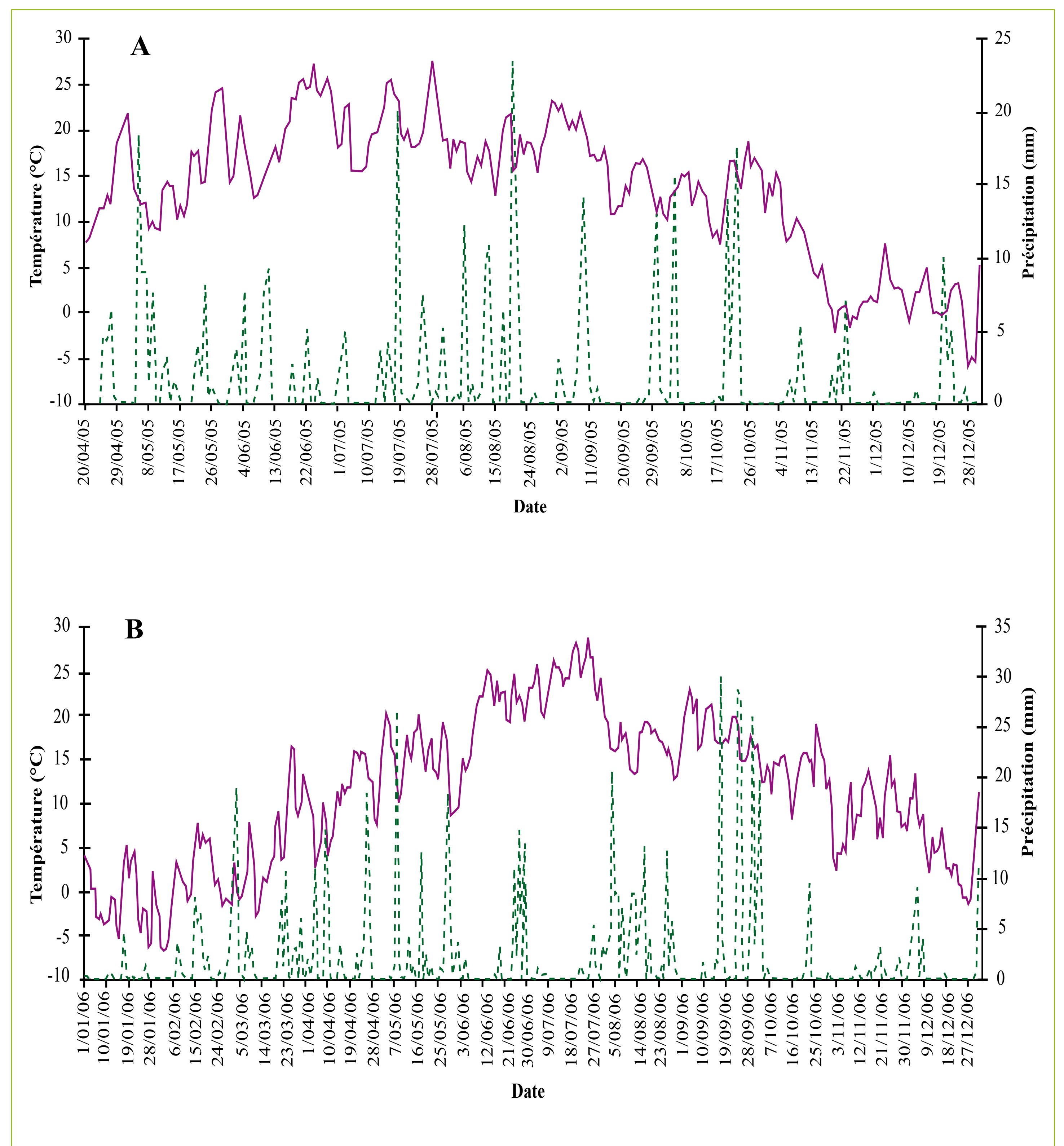
Figure 1 : Cumulated quantity of airborne conidia of *Botryosphaeria obtusa* (red) and *Botryosphaeria stevensii* (black) between 1st April 2005 and 21st December 2005 (A) and between 1st January 2006 and 31st December 2006 (B)



NOTATION AND EXPRESSION OF THE RESULTS

Spore numeration was done every seven days during the vegetative season, every 14 days during the non vegetative season and directly after a raining period. The results are expressed in number of spores present on the slides. The extraction of the spores on petroleum jelly was done by dissolution with 3 ml of water at 70°C. After homogenisation, the numbers of spores were evaluated with a hemacytometer. Identification was carried out using the key proposed by Philipps. (http://www.crem.fct.unl.pt/botryosphaeria_site).

Figure 2 : Temperature (bold line) and precipitations (dotted line) between 1st April 2005 and 21st December 2005 (A) and between 1st January 2006 and 31st December 2006 (B)



RESULTS AND DISCUSSION

Spores of *Botryosphaeria obtusa* and *Botryosphaeria stevensii* were captured during all the year. The peak of production occurred in the vegetative period for *B. obtusa*. *B. stevensii* releases its spores later than *B. obtusa*. This data shows that opportunities for the reduction of disease incidence based on spore availability during the year appear limited.

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